VAST TECHNOLOGIES INC.

Digital Microscope

DMC-1113

User Manual

Features

VAST digital microscope provides 10~200X adjustable magnification range. The build-in high-performance white LED can illuminate the object without using any auxiliary light. Adjust focus knob on the flank, the magnified image can be seen, captured and recorded from computer screen with VGA (640x480) & SXGA (1280X1024) resolution directly.

Specifications

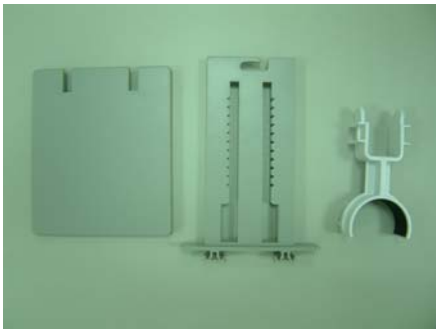
- Image Sensor: 1/4” Color CMOS image sensor
- Effective Pixels: 1280 (H) x 1024 (V) pixels
- Signal Output: Serial data for USB standard compliant 2.0
- Light Control: Automatic Gain Control (AGC)
- Magnification: 10X~200X
- Snap Shot Mode: Software controllable
- Power Source: 5VDC, 110mA (AVG.) through USB port
- O/S: Windows XP SP2 and VISTA
- CE, FCC and RoHS Compliant

Applications

- Skin Check
- Scalp Check
- Industrial Inspection e.g. Printing Circuit Board(PCB)inspection,
- Electronics device inspection
- Visual Assistance
- Printing Inspection
- Textile Inspection
- Paper money Inspection
- Jewelry Inspection
- Science Learning

Contents

- Digital Microscope Device
- CD
- User manual
- Stand



PC System Requirement

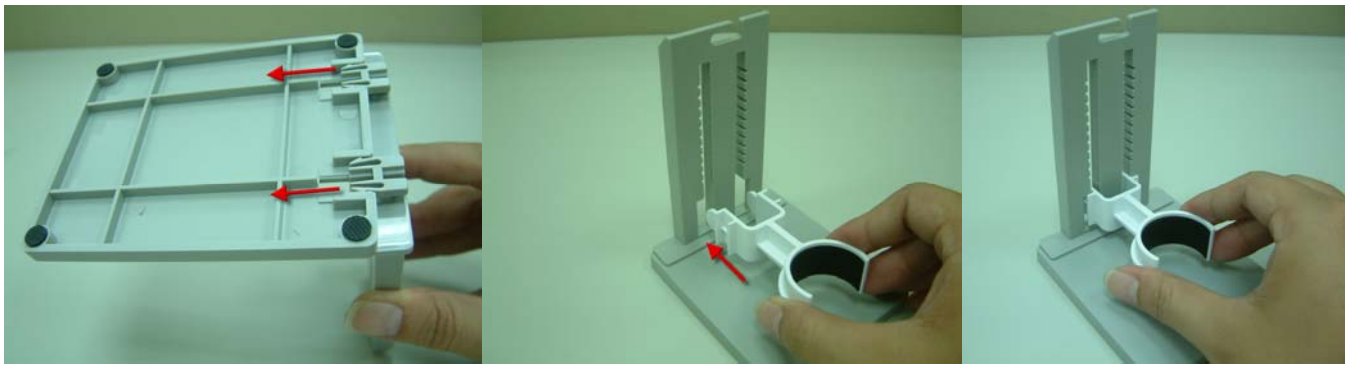
- Pentium 4 Class CPU
- 128 MB of system RAM
- One USB 2.0 port or above
- VGA system with at least 16bit color support
- UVC: Windows XP SP2 or above

Driver Installation Procedure

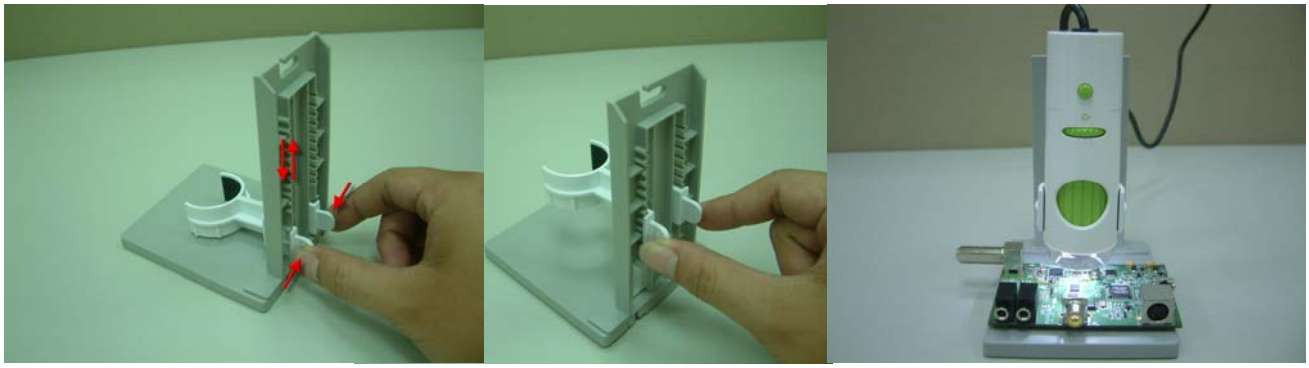
This device supports “Universal Video Class” driver, no additional driver required. Plug in device and system (Windows XP SP2 or above) will install driver automatically.

Getting Started

1. Stand assembly:



a.) Push and Lock the stand.



b.) Press the holder, pull up and down to adjust distance between microscope and object.
c.) Place microscope on the stand holder.

2. Please insert the VP-EYE 6.0 software installation CD into CD-ROM drive, the software will install automatically.

3. Plug the USB cable into the PC USB port.

4. Click 【VP-EYE 6.0】software, image will show up.

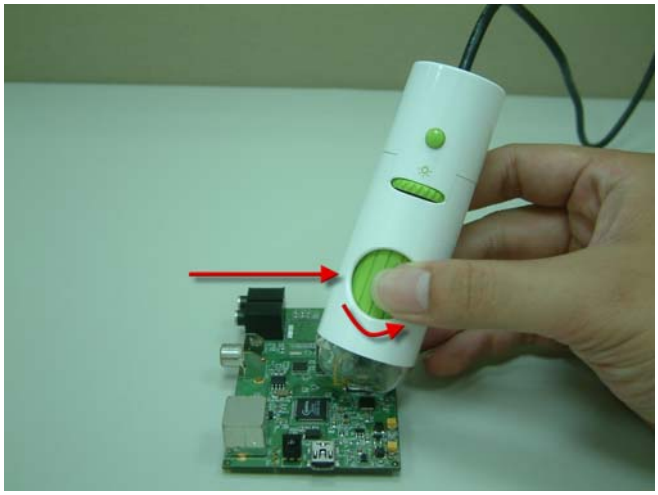
5. Put the object near the center position.

6. Please tilt the VAST digital microscope slightly when close the object, in order to get 3D image.

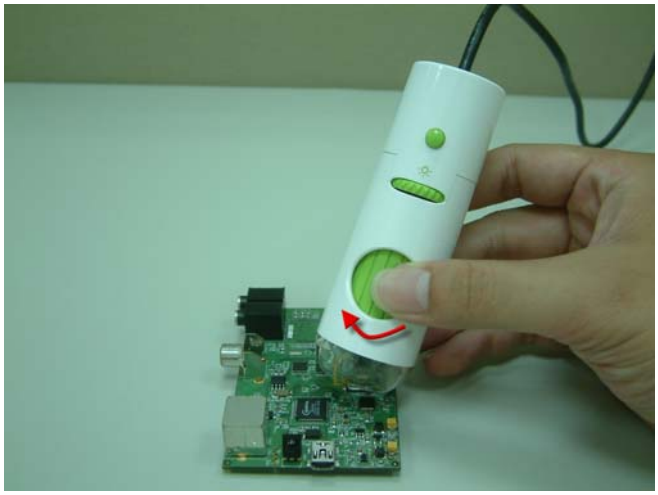
7. VAST digital microscope can be used to get the proper image size as the user's wish. The closer you put VAST digital microscope to the object, the bigger image you can get.

8. The clear image can be got by adjusting the focus knob as well as changing the distance between the object and VAST digital microscope .

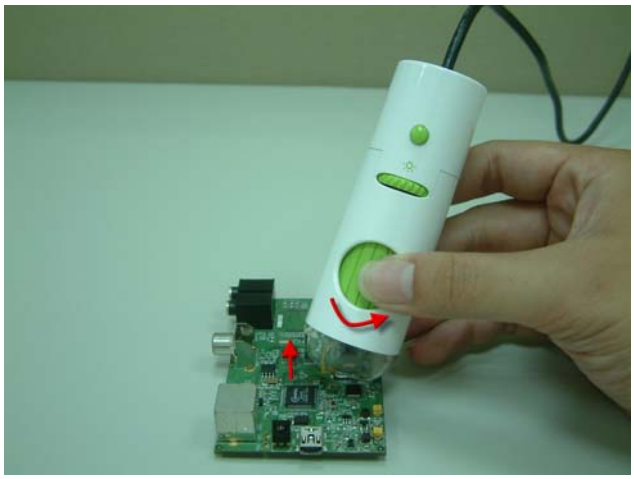
9. If the image is blurred, adjust the focus knob to the right end and view the image of the object in lower magnification first.



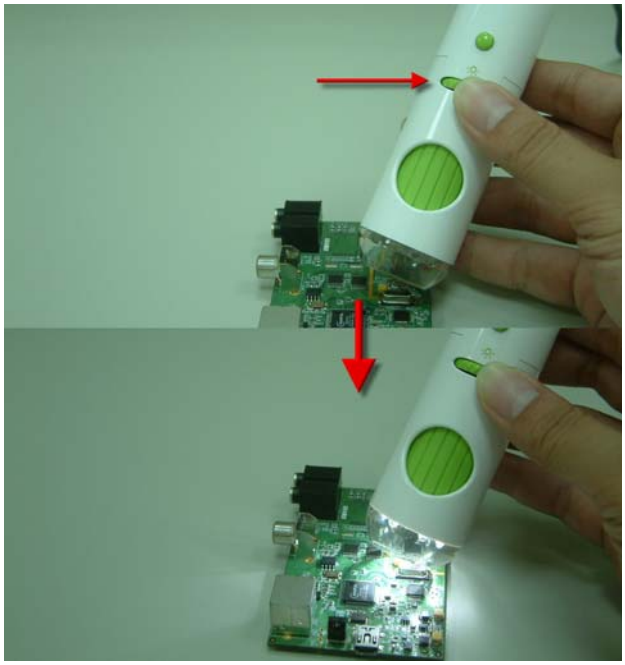
10. When magnify the image of the object, adjust the focus knob slightly to the left and move VAST digital microscope up and down until a clear image shows up.



11. If the object is lumpy or a higher magnification (bigger image) is unnecessary, lift VAST digital microscope a little bit and adjust the focus knob to the right slightly until a clear image shows up.

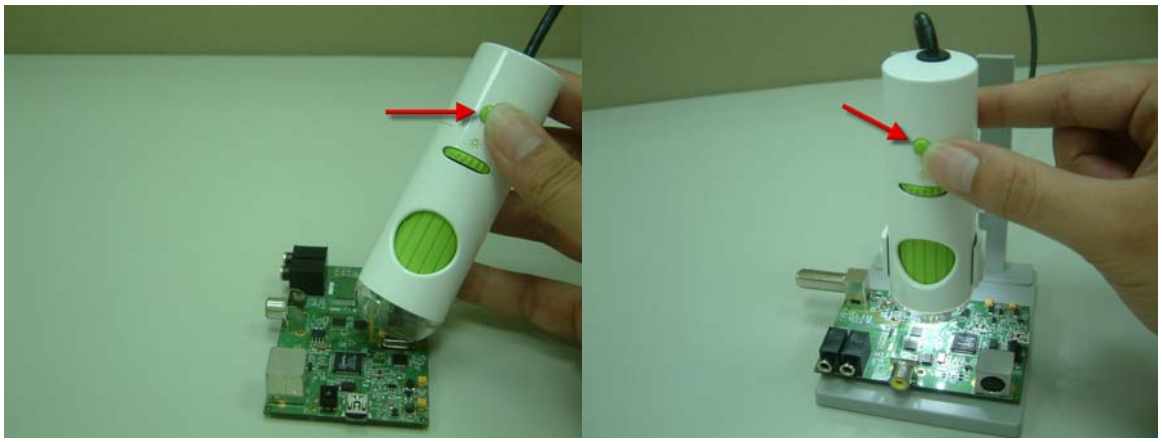


12. If the object is too dark or bright, adjust the light knob to get the light you need. Turn right to get brighter light and left to get darker light.



13. When use high magnification or observe the specific area of the object, we suggest user placing the VAST digital microscope on the stand holder to get clear image.

14. Use hardware snap button to capture image.

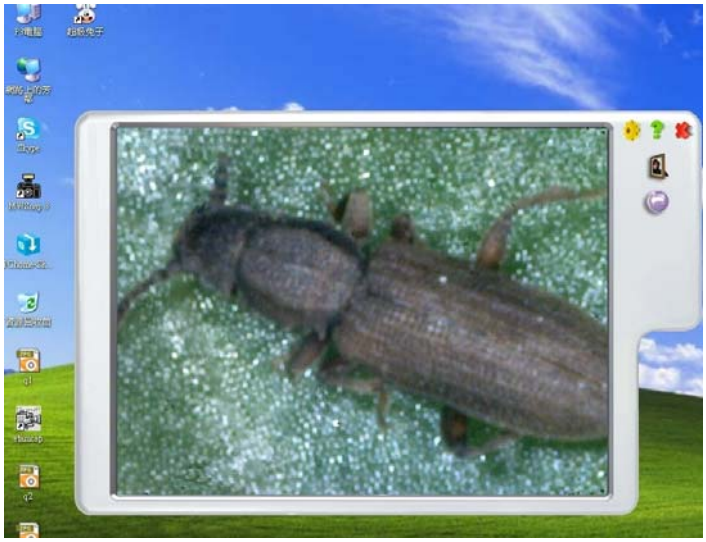


Application Software

Start

Click 【VP-EYE 6.0】

Then image will show up.



Function Key lists:

Enter the tools window

Enter this users guide

Close this program

Select the snapshot and recording functions

Select the brightness and contrast level

Select the zoom-in and zoom-out functions

Select the input resolution for the video camera

Select the playback function

Select the video frames and video effects

Snapshot and recording

Click the icon on tool bar to snapshot and recording

Brightness and contrast

Click the icon on tool bar to select the brightness and contrast level.
Set the brightness level to the default value from driver. You may use the scroll bar on the below to adjust the level for brightness.
Set the contrast level to the default value from driver. You may use the scroll bar on the below to adjust the level for contrast.

Zoom-in and Zoom-out

Click the icon on tool bar to select the zoom-in and zoom-out functions

Zoom-in the video frames, it can zoom-in up to 4 times (1:4).

Zoom-out the video frames, it can zoom-out back to the original size (1:1).

Pan the video position, moving up/down/left/right.

You may also use the arrow keys on keyboard to do the same panning functions.

Resolution

Click the icon on tool bar to select the input resolution(640x480 or 1280x1024).

Playback

Click the icon on tool bar to select the playback function.

The playback function can display the capture photo or play the movie on the video screen. Playback the capture photo file or movie file. The movie is played in the video screen and the photo is displayed in the dialog box.

Special function -Video frames & effects

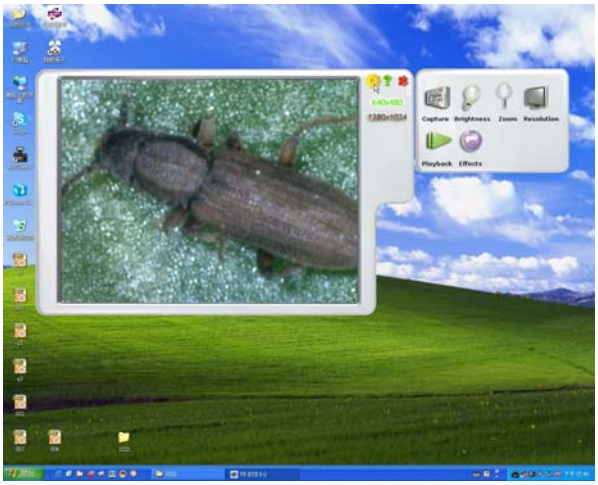
Click the icon on tool bar to select the video frames and video effects

Click the icon on tool bar to select a frame to add in the real-time video screen. The selected frame will be added in the video screen. It will appear in the photo snapshot and video recording.

Select an video effect to add in the real-time video screen, the selected effect will be added in the video screen. It will appear in the photo snapshot and video recording.

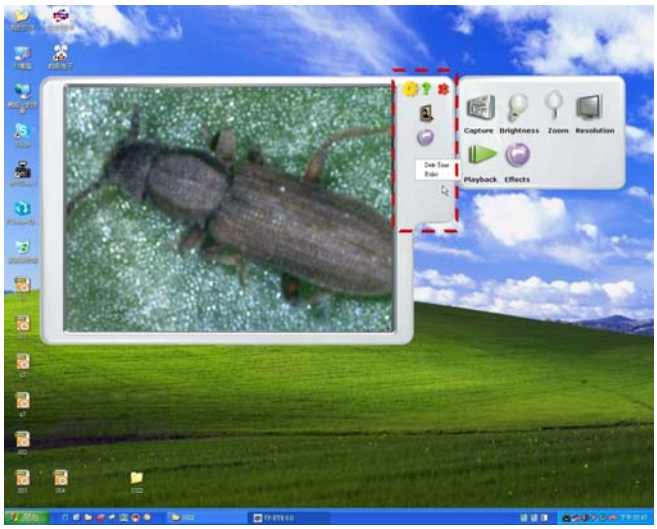
Special function - Time Record

1. Click the icon on tool bar.

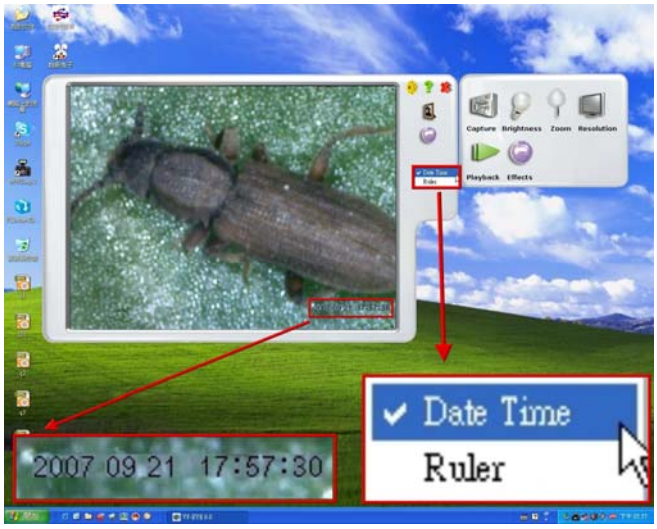


2. Click the icon.

3. Click the right button of the mouse on tool bar, and quick menu will show up. There has “Date Time” can be selected.



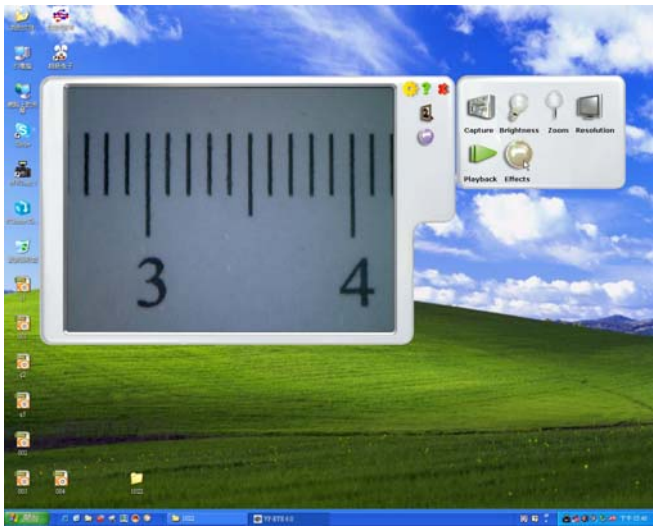
4. Select “Data Time” to get time and date which will show on the right corner of the downside of screen.



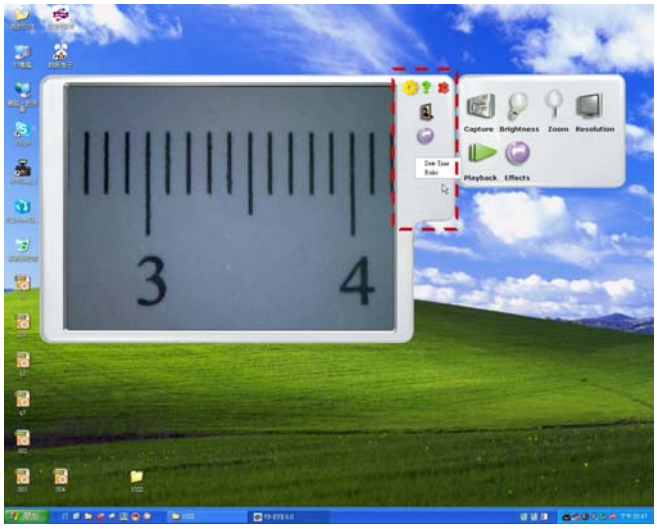
Special function - Measurement

1. Click the icon on tool bar.

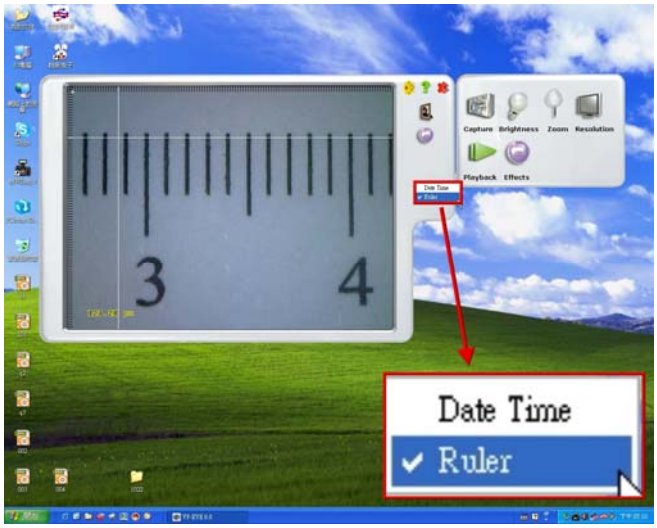
2. Click the icon.



3. Click the right button of the mouse on tool bar, and quick menu will show up. There has “Ruler” can be selected.

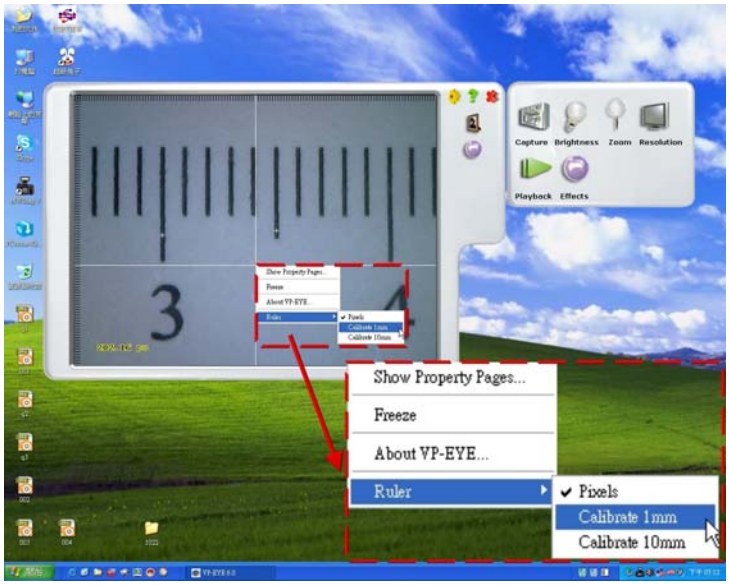


4. Select “Ruler”. The default setting is “pixel”. Please follow below steps to change the measurement unit to “mm”.

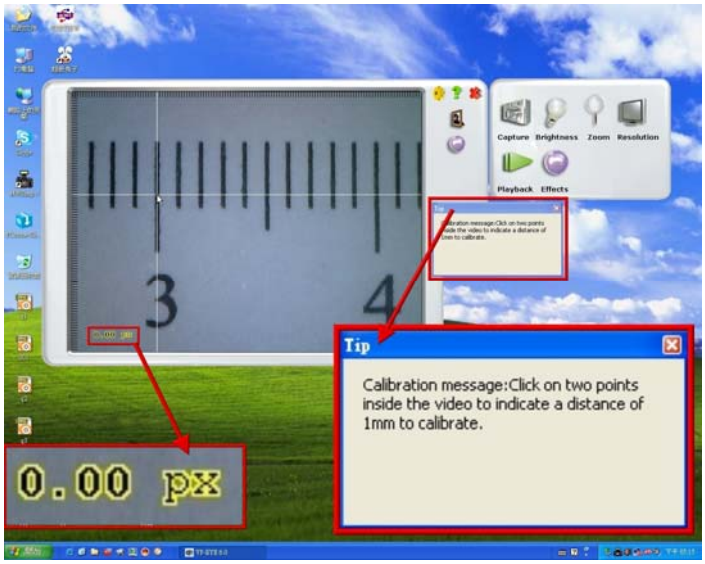


5. Please put a ruler near the center position of VAST digital microscope.

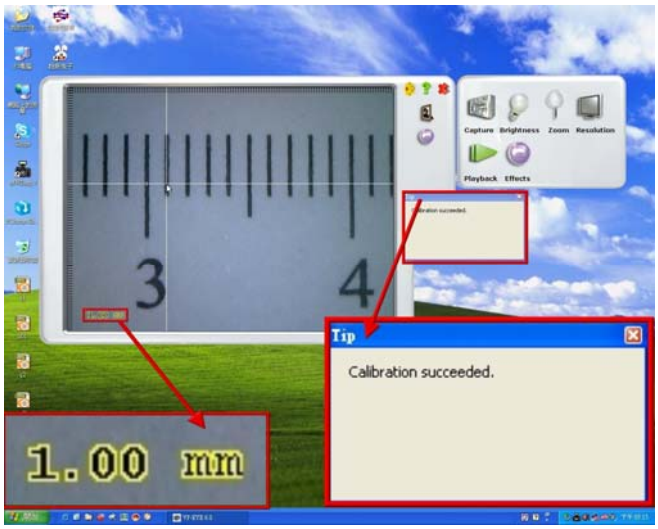
6. Click the right button of the mouse on the screen and quick menu will show up. Select “Calibrate 1mm” (or “Calibrate 10mm”.)



7. When the “Tip” appears, move the cross line and select the first point of calibration.

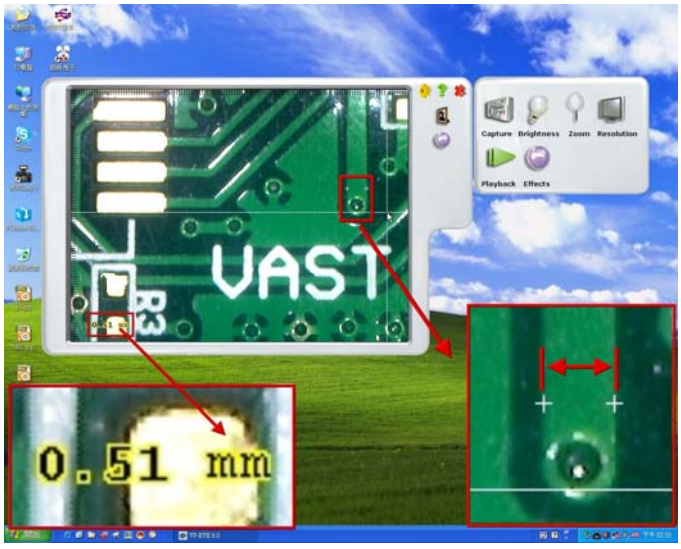


8. Move the cross line and select the second point of calibration. When the “calibration succeeded” Tip appears, calibration is completed and the indication will show 1.00mm (or 10.00mm) on the left corner of the downside of screen. (According to your selection, the distance between the first and second point must be 1mm (or 10mm) of your ruler).

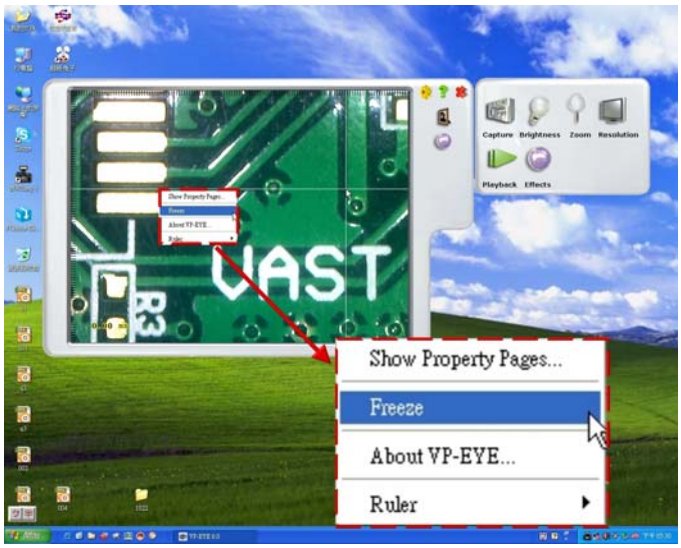


9. Move the cross line and select the first point of the object, the indication will be “0.00 mm”.

10. Move the cross line and select the second point of the object to get real size of the object.



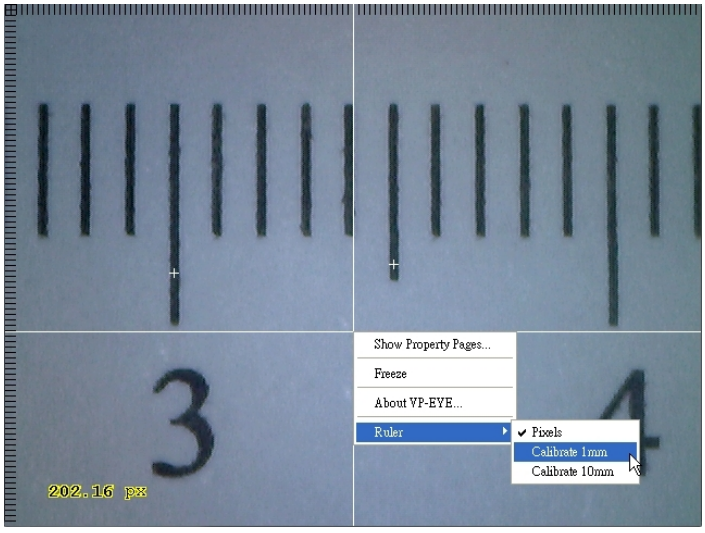
11. Click the right button of the mouse on the screen, and quick menu will show up. Select”Freeze” to get still image for further observation.



Special function--Full Screen

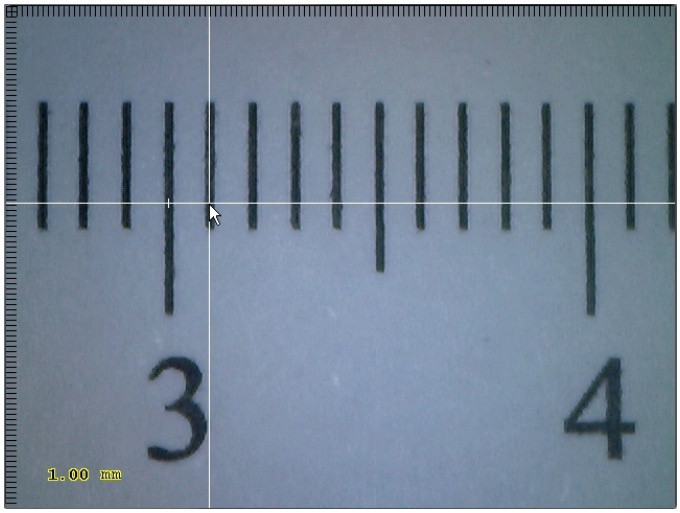
A. Ruler

Double click the left button of the mouse on the screen to get full screen image.
Click right button of the mouse on the screen to get “Ruler” function.
Please follow above calibration steps to calibrate the “Ruler” again when exit different mode, in order to get correct measurement function.



B. Capture

Click the icon on tool bar and double click the left button of the mouse on the screen to get full screen image. Press the “Space Key” on the keyboard to capture image.



Notice

- If the image of screen flickers when use the VAST digital microscope, please turn the LED light off for 1-2 seconds, and then turn it on to start to operate.
- Make sure to turn off the power to prevent overheating after using.
- Do not strike the microscope to avoid any damage.